

**Remarks**

Applicants respectfully request that the Examiner reconsider the rejections issued in the outstanding Office Action in light of the following remarks. Applicants submit that the claims are patentable over the cited references and are in condition for allowance.

The Examiner has rejected claims 1-7 and 10-13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,275,152 to Krauter et al. ("Krauter") in view of U.S. Patent No. 6,749,560 to Konstorum et al. ("Konstorum") and further in view of U.S. Patent No. 6,540,669 to Abe et al. ("Abe"). Claims 1 and 13 are the only independent claims in the present application.

Both claim 1 and claim 13 recite an endoscope insertion shaft that comprises a tubular member including a continuous wall. Both claims also recite that the tubular member is sheathed or jacketed by four distinct layers: a barrier layer jacketing the tubular member, a braided layer jacketing the barrier layer, a laminating layer, and a wear layer.

Krauter discloses an insertion tube body for an endoscope. The tube body 15 has a helical monocoil 21 extending along its length. (Krauter, col. 3 lines 40-41). A tubular sleeve or jacket 22 of urethane is disposed over the monocoil 21 and a tubular braid layer 23 is disposed over the jacket 22. (Krauter, col. 3 lines 43-45). A coating 24 of polyurethane impregnates and adheres to the braid 23 and to the jacket 22 and forms an outer skin for the insertion tube body 15. (Krauter, col. 3 lines 46-49). This arrangement is clearly shown in FIG. 2 of Krauter. Thus, Krauter discloses an endoscope insertion shaft having only three layers jacketing a tubular member (the monocoil 21), as the Examiner acknowledges on page 3 of the Office Action of February 28, 2008.

The Examiner submitted, however, that it would have been obvious to one of ordinary skill in the art to include an outer "wear layer" on the sheath of Krauter to

provide a cover that would suffer very little degradation over repeated cleanings and sterilizations, as taught by Abe. (Office Action of February 28, 2008, page 3). Applicants respectfully submit that Abe would not have motivated one of ordinary skill in the art to include a fourth “wear layer” on the device of Krauter.

First, Krauter explicitly teaches that the polyurethane coating 24 is an “outer skin” for the insertion tube body 15. (Krauter, col. 3 lines 46-49). Applicants respectfully submit that coating 24 is intended to be a cover to provide protection to the insertion tube body. Such an outer skin or cover is precisely what the Examiner submits that one of skill in the art would have wanted to include based on the teaching of Abe. However, since Krauter already includes an outer “wear layer,” one of ordinary skill in the art would not have been motivated to look elsewhere to find a suitable outer “wear layer.”

Applicants submit that, in fact, there is no appreciable difference between the “outer skin” coating 24 of Krauter and the outer layer disclosed in Abe. Abe teaches an outer layer 34 and teaches that this layer is preferably formed of a material having chemical resistance and that will suffer very little degradation over repeated cleaning and sterilization. (Abe, Col. 11, lines 58-61). Further, Abe explicitly teaches that the outer layer 34 could be made out of polyurethane (Abe, Col. 11 line 66 – Col. 12 line 5), which is precisely the material that Krauter teaches to use for its “outer skin” coating 24. Applicants respectfully submit that one of ordinary skill in the art would never have been motivated to add an additional outer layer to the device of Krauter based on the teaching of Abe, since both Krauter and Abe teach a nearly identical outer wear layer made of polyurethane.

Second, if Abe would have provided any motivation at all to one of ordinary skill in the art, the motivation would have been to change the material of the outer coating 24 of Krauter. Abe provides, at Column 12, lines 1 – 14, a lengthy list of material disclosed to be suitable for use as the outer layer 34. One of ordinary skill in the art reading the disclosure of Abe may have been motivated to select an alternative material for use as

the outer skin coating 24 of Krauter, but Abe contains nothing that would motivate that person to add a layer to the device of Krauter.

For at least the foregoing reasons, Applicants respectfully submit that the claimed invention is not obvious in light of the cited references and is patentable. One of ordinary skill in the art would never have been motivated to make the combination submitted by the Examiner. The claimed invention is novel, nonobvious, and patentable over the cited references. Applicants submit that all claims pending in the application are in condition for allowance and early notice that effect is earnestly requested.

Respectfully submitted,

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/Wesley W. Whitmyer, Jr./

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